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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,908	10/29/2001	Waheguru Pal Singh	LYNN/120.A	9750

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EXAMINER

QAZI, SABIHA NAIM

ART UNIT PAPER NUMBER

1616

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,908

Applicant(s)

SINGH ET AL.

Examiner

Sabiha Qazi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-37, 40-42 and 44-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 26-37, 40-42 and 44-49 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Final Rejection

Acknowledgement is made of the response and declaration filed on 1/21/05. Claims 26-37,40-42 and 44-49 are pending. All are rejected. No claim is allowed.

Response to Remarks Filed on January 21, 2005

The Rejection Over 35 USC 102(a)

The remarks are unclear.

Most of the argument is based on *prima facie* obviousness and cites case law about *prima facie* obviousness. This is a 102(a) anticipation rejection, not a 103(a) obviousness rejection.

The Applicants argue that CAMPESTRINI does not disclose a solid dipercarboxylic acid as claimed by the Applicant. The Examiner respectfully disagrees.

The Rejection Over 35 USC 103(a)

1) OAKES and PLOUMEN---It appears these remarks were copied essentially verbatim from the previous Remarks (filed on August 3, 2004). The Examiner responded to this in the previous Office Action, but will provide these arguments again for Applicant's convenience:

Applicants argue that the claimed invention does not have any organic compounds and contain an exothermic control agent, but the claim uses the word "comprising". The term "comprising" cited in claims is inclusive and fails to exclude unrecited steps. The use of the term comprising to introduce claimed structure means that the ingredients covered by these claims may involve more elements than those positively recited. Exparte Gottzein et al., 168 USPQ 176

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(PTO Bd. App. 1969). Comprising leaves the claim open for inclusion of unspecified ingredients even in major amounts. Ex parte Davis et al., 80 USPQ 448 (PTO Bd. App. 1948).

Applicants argue that the instant inventions provide a sterilizing solution, whereas prior art teaches a disinfectant. Examiner respectfully disagrees.

Examiner would like to make two points:

i) The OAKES et al reference gives sterilizing results (see col. 8, lines 1-24, specifically line 24). The reference even says, "Higher levels of peracids can be employed in the use solution to obtain disinfecting or sterilizing results." The reference teaches BOTH disinfecting and sterilizing results.

ii) Even if OAKES et al didn't teach this, it has been established by the Courts that even in a case where the reference does not teach the same use of the composition, the two different intended uses are not distinguishable in terms of the composition, see In re Thuau, 57 USPQ 324; Ex parte Douros, 163 USPQ 667; and In re Craige, 89 USPQ 393.

Furthermore, OAKES et al teaches the use of a stabilizer (see Abstract). In the instant application, they're using the term "exothermic control agent". It appears these two have the same function when present in a solution.

2) SCHEPERS et al and COOPE et al---It appears these remarks are copied essentially verbatim from the last few Remarks filed by the Applicants. For the Applicants' convenience, the Examiner is providing the reasons why the rejection is being maintained from a prior Advisory Action:

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Rejection under 103 is maintained because compositions as claimed are considered obvious for the same reason as set forth in our previous Office Action. It would have been obvious to prepare additional beneficial compositions as disclosed by the prior art. Even if prior does not teach use for sterilization of the composition, the two different intended uses are not distinguishable in terms of the composition, see In re Thuau, 57 USPQ 324., Ex parte Douros, 163 USPQ 667., and In re Craige, 89 USPQ 393. There is nothing inventive in a composition of old ingredients of known properties with each ingredient individually as expected. In re Sussaman. 58 USPQ 262.

3) The Applicants argue that LAGNEMO et al does not teach or suggest that the diacylated dipercarboxylic acids can be dissolved in water at a concentration high enough to form a sterilizing solution, i.e. greater than 0.1.wt% as claimed by the Applicants. The Examiner requests the Applicants to show the unexpected results and/or criticality of the invention.

Evidence of unexpected results must be weighed against evidence supporting prima facie obviousness in making a final determination of the obviousness of the claimed invention. In re May, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978) (Claims directed to a method of effecting analgesia without producing physical dependence by administering the levo isomer of a compound having a certain chemical structure were rejected as obvious over the prior art. Evidence that the compound was unexpectedly nonaddictive was sufficient to overcome the obviousness rejection. Although the compound also had the expected result of potent analgesia, there was evidence of record showing that the goal of research in this area was to produce an analgesic compound which was nonaddictive, enhancing the evidentiary value of the showing of

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nonaddictiveness as an indicia of nonobviousness.). See MPEP § 716.01(d) for guidance on weighing evidence submitted to traverse a rejection.

Where the unexpected properties of a claimed invention are not shown to have a significance equal to or greater than the expected properties, the evidence of unexpected properties may not be sufficient to rebut the evidence of obviousness. In *re* Nolan, 553 F.2d 1261, 1267, 193 USPQ 641, 645 (CCPA 1977) (Claims were directed to a display/memory device which was *prima facie* obvious over the prior art. The court found that a higher memory margin and lower operating voltage would have been expected properties of the claimed device, and that a higher memory margin appears to be the most significant improvement for a memory device. Although applicant presented evidence of unexpected properties with regard to lower peak discharge current and higher luminous efficiency, these properties were not shown to have a significance equal to or greater than that of the expected higher memory margin and lower operating voltage. The court held the evidence of nonobviousness was not sufficient to rebut the evidence of obviousness.); In *re* Eli Lilly, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (Evidence of improved feed efficiency in steers was not sufficient to rebut *prima facie* case of obviousness based on prior art which specifically taught the use of compound X537A to enhance weight gain in animals because the evidence did not show that a significant aspect of the claimed invention would have been unexpected.).

35 USC § 102(a)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 26-37,40-42 and 44-49 are rejected under 35 U.S.C. 102(a) as being anticipated by CAMPESTRINI et al¹.

CAMPESTRINI et al. discloses the compositions of diperacids (also called mono- or di-percarboxylic acids) having from 5 to 12 carbon atoms. See paragraph [0006] on page 2. The reference also discloses an activator that needs to meet a balance between shelf-stability of that combination, and its capability to react as fast as possible in water. See paragraph [0004] on page 2. See paragraphs [0025]-[0029], all claims, and examples.

35 USC § 103(a)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 26-37, 40-42, and 44-49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US 5503765 (SCHEPERS et al) and US 5268003 (COOPE et al). Both

¹ European Patent No. 0 905 227 A1, published on March 31, 1999.

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references teach a dipercarboxylic composition, which embrace the Applicant's claimed invention.

SCHEPERS et al discloses a non-aqueous liquid composition of dipercarboxylic acid, which is stable even at room temperature. It also teaches that this composition may be stably incorporated for five days or greater. It gives the same range (at least 0.1%) as the applicant's claimed invention. See the entire document, especially the abstract, lines 22-37 in Column 2, the examples, and claims.

COOPE et al discloses an aqueous liquid composition of dipercarboxylic acid, which is stable even at room temperature. See the entire document, especially lines 16-21 in Column 8, examples, and claims.

Examiner notes that COOPE et al does *not* disclose a range. However, with SCHEPERS et al, it would have been obvious to those with ordinary skill in the art to put these two teachings together at the time of invention. There is enough motivation in the cited references to prepare the composition in the presently claimed invention. No unobvious or unexpected results are noted.

2. Claims 26-37, 40-42, and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5437868 (OAKES et al) and US 5049298 (PLOUMEN et al). Both references teach dipercarboxylic acid compositions, which embrace the Applicant's claimed invention.

OAKES et al teaches peroxyacid antimicrobial concentrates for sanitizing surfaces, facilities, and equipment found in food manufacturing and food processing and food service industries, and typically hard non-porous surfaces in the health care industry. (See lines 10-15 in

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col. 1) Furthermore, OAKES et al teaches diperoxydicarboxylic acid aqueous compositions. See the entire document, especially the examples and claims (*especially* claim 2).

PLOUMEN et al teaches a process for the preparation of organic peroxyacid containing bleaching granules or powder. (See lines 45-47 in col. 2) Furthermore, PLOUMEN et al lists preferred diperoxy acids in lines 60-68 in col. 4 and 1-8 in col. 5. See the entire document, especially the examples, the claims, and Tables I and II.

The instant invention differs from the prior art in that the presently claimed invention is using the dipercarboxylic acid in solid form and using it as a sterilant in aqueous form while the prior art teaches the same aqueous composition for use as peroxyacid antimicrobial concentrates for sanitizing surfaces, facilities, and equipment found in food manufacturing and food processing and food service industries, and typically hard non-porous surfaces in the health care industry (OAKES et al). The prior art teaches the solid form of peroxyacids in the form of granules or powder (PLOUMEN et al).

3. Claims 26-37, 40-42, and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over and LAGNEMO et al². The prior art teaches a bleaching agent of Formula I, which is a dipercarboxylic acid. This bleaching agent is stable during storage. It gives a satisfying yield of percarboxylic acids in aqueous solutions and can be used without or with less supply of hydrogen peroxide than bleaching agents presently available. The agent should have capability to generate percarboxylic acids with a suitable rate to achieve a constant concentration during a whole washing cycle, and be compatible with other components in a detergent. Finally, it is desirable that it is harmless and inexpensive. In order to stabilize against decomposition

² United States Patent No. 5415668, filed on November 6, 1992.

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catalyzed by metal cations, such as Cu.sup.2+, Mn.sup.2+ or Fe.sup.3+, the composition may also may contain small amounts of sequestering agents, such as EDTA, NTA, dipicolinic acid, or phosphonates, for example Dequest 2010.RTM., Dequest 2016.RTM.or Dequest 2040.RTM., preferably in amounts from 0.1 to 1% by weight, and optionally in combination with magnesium silicate. Compositions according to the prior art are useful for all kinds of bleaching in alkaline environment, in which bleaching means oxidative decomposition of chromophoric systems, which regarding peracids probably is due to the oxidation of conjugated double bonds. The composition is specifically advantageous at bleaching in combination with cleaning, especially at washing of textiles, in which case a good bleaching effect is obtained at such low temperatures as 20 degrees Celsius. See the entire document, especially lines 45-62 in col. 1, lines 25-32 in col. 7, lines 52-60 in col. 7, and lines 7-17 in col. 9.

Instant claims differ from the reference in generating dipercarboxylic acids by using the compounds of Formula I, cited below.



Formula I

In the instant invention, Applicants are using dipercarboxylic acids for the preparation of the composition. All ingredients of the compositions as presently claimed are taught by the prior art.

The complete composition is given in the Table in lines 7-17 in col. 9. A copy of this table is cited below:

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diacylated dipercarboxylic acids	1-10
perborate	5-15
anionic surfactants	5-20
nonionic surfactants	2-11
soaps	0,1-4
sequestering agents	0,1-1
fillers	16-50
zeolites	10-45
polycarboxylates	3-5
sodium carbonate	5-15

Table in Lines 7-17 of Column 9

It would have been obvious to one skilled in the art at the time of invention to prepare additional beneficial compositions in solid or aqueous form because the prior art teaches it for the reasons cited above.

In the light of the forgoing discussion, the Examiner's ultimate legal conclusion is that the subject matter defined by the instant claims would have been obvious within the meaning of 35 U.S.C. 103(a).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sabiha Qazi whose telephone number is (571) 272-0622. The examiner can normally be reached on any business day.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on (571) 272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SABIHA QAZI, PH.D
PRIMARY EXAMINER

Sunday, June 5, 2005